

ON THE PECULIARITIES  
OF RADIAL TEMPERATURE DISTRIBUTION  
IN THE CHANNEL OF PULSED DISCHARGE  
IN WATER AT THE RELAXATION STAGE

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S u m m a r y

The results of measurements of the radial temperature distribution of pulsed discharges in water are reported. The data obtained concern the relaxation stage for discharges with small inductances of the discharge circuit and the active stage for discharges characteristic of pulsed discharge installations. A number of corrections, which are typical of the radiation emission of non-homogeneous, optically thick plasmas and take into account the features of the radiation output from a cylindrical plasma channel located in a liquid, have been made. The measurements of the maximal temperature along the observation beam path were carried out by analyzing the radiation intensity maxima of the reabsorbed hydrogen line  $H_{\alpha}$  (656.3 nm) in both red and violet wavelength ranges. A practically plateau-like distribution of temperatures across the channel diameter has been obtained, which may be considered as an evidence for an almost uniform distribution of plasma parameters over the channel cross-section.